

**REMARKS/ARGUMENTS**

The Applicants originally submitted Claims 1-9 in the application. In previous responses, the Applicants amended Claims 1, 3-9 and 11, added Claims 10-12, and canceled Claims 1-2 without prejudice or disclaimer. In the present response, the Applicants have amended Claim 12 in response to a new §101 rejection. Claims 3-12 are currently pending in the application.

**I. Rejection of Claims 3-12 under 35 U.S.C. §101**

The Examiner has rejected Claims 3-12 under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. In response, the Applicants have amended independent Claim 12 to comply with 35 U.S.C. §101. The Applicants therefore respectfully request the Examiner withdraw the rejection and allow issuance of Claim 12 and those Claims dependent thereon.

**II. Rejection of Claims 3-4, 6, 10 and 12 under 35 U.S.C. §102**

The Examiner has rejected Claims 3-4, 6, 10 and 12 under 35 U.S.C. §102(e) as being anticipated by “Minimum Classification Error (MCE) Model Adaptation of Continuous Density HMMs,” Eurospeech-2003, September 1-4, 2003, 1629-1632 by He, *et al.* (“He”). The Applicants respectfully disagree.

He relates to MCE model adaptation for continuous density HMMs based on a super string model approach. (*See Abstract.*) He discloses an algorithm that “is well suited for model adaptation with a small amount of training data.” (*See Abstract.*) The Examiner asserts He discloses each limitation of independent Claim 12 and relies on section 4 of He to disclose a “scaling factor” and

“updating the scaling factor.” (See Examiner’s Action, page 4.) The Examiner also appears to assert that “parameters” are scaling factors as presently claimed. (See Examiner’s Action, pages 2 and 4.)

He, however, including section 4, does not teach “calculating a new scaling factor by adding a correction item to a previous scaling factor.” On the contrary, He discloses an adaptive covariance matrix that is updated based on decomposition and multiplication of matrices wherein one of the matrices is an adaptive matrix. (See section 4 of He.) Thus, even assuming *arguendo* that He is updating a scaling factor, He does not perform this update by **adding** a correction item. Instead, He appears to update through multiplication of matrices with one matrix being an adaptive matrix.

Additionally, the Applicants fail to find where section 4 of He discloses updating a scaling factor **each time new data is available**. Instead, as indicated in the Abstract, He uses training data. For example, in section 5.1, He discloses using a data set that uses 40 utterances for adaptation and then other utterances for testing. Table 1 in section 5.2 also demonstrates the number of adaptive utterances that are used instead of updating **each time new data is available**.

Accordingly, at least based on the above arguments, He fails to disclose each limitation of Claim 12 as applied by the Examiner. As such, the Applicants respectfully request the Examiner to withdraw the §102 rejection with respect to Claim 12 and Claims 3-4, 6 and 10 which depend thereon and allow issuance thereof.

### III. Rejection of Claims 5, 7-9 and 11 under 35 U.S.C. §103

The Examiner has rejected Claims 5, 7-9 and 11 under 35 U.S.C. §103(a) as being unpatentable over He in view of: U.S. Patent No. 5,924,065 to Eberman, *et al.* (“Eberman”) for Claims 5, 7 and 9; U.S. Patent No. 6,266,638 to Stylianou (“Stylianou”) for Claim 8; and U.S. Patent

Application Publication No. 2002/0026253 to Rajan ("Rajan") for Claim 11. The Applicants respectfully disagree.

As argued above, He fails to disclose each limitation of independent Claim 12. He also fails to suggest each limitation since He relates to MCE model adaptation using training data, updating the model with the training data and then doing recognition of utterances. (*See* Abstract and section 5.1.) In contrast, the present invention provides continuous sequential updates of scaling factors. Eberman, Stylianou and Rajan have not been cited to cure the deficiencies of He regarding independent Claim 12 but to disclose the additional limitations of the above dependent Claims. As such, the cited combination of He with Eberman, Stylianou or Rajan do not provide a *prima facie* case of obviousness of Claim 12 and Claims dependent thereon. The Applicants therefore respectfully request the Examiner withdraw the §103(a) rejection of Claims 5, 7-9 and 11 and allow issuance thereof.

#### IV. Conclusion

In view of the foregoing amendment and remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 3-12.

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application. The Commissioner is hereby authorized to charge any fees, credits or overpayments to Deposit Account 20-0668.

Respectfully submitted,

**HITT GAINES, PC**



J. Joel Justiss  
Registration No. 48,981

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P.O. Box 832570  
Richardson, Texas 75083  
(972) 480-8800